

IN THE CLAIMS:

1. (Currently Amended) An apparatus Apparatus for non-destructive hyperthermia therapies, characterized in that it comprises the apparatus comprising:

generating means for generating radio-frequency electromagnetic radiation[[s]], connectable to application means for the application of said radiation[[s]] to a skin portion of a the human body, said application means comprising an active electrode and a reference electrode, said active electrode being provided with a sensor means for the detection of skin temperature of the skin portion, said sensor means including at least a sensor incorporated in said active electrode.

2 – 3 (Canceled)

4. (Currently Amended) An apparatus Apparatus according to claim [[2]] 1, characterized in that the wherein said sensor means for the detection of the skin's temperature are made up of at least comprises a sensor which can be connected to the apparatus and [[.]] removably associated with the active electrode in correspondence of a relevant seat thereof, said active electrode having a seat complementarily matching a corresponding connector of the sensor.

5. (Currently Amended) An apparatus Apparatus according to claim [[2]] 1, characterized in that the wherein said sensor means for the detection of the skin's temperature are connected to a control circuit connectable to and acting on said generating means for

generating[[']] radio-frequency radiation[[s]].

6. (Currently Amended) An apparatus Apparatus according to claim [[2]] 1, characterized in that the wherein said electrodes consist of conductive plates or membranes.

7. (Currently Amended) An apparatus Apparatus according to claim [[2]] 1, characterized in that the wherein structure of the active electrode is complementary shaped with respect to the body's the skin portion of the human body region of the patient to be treated.

8. (Currently Amended) An apparatus Apparatus according to claim [[2]] 1, characterized in that the wherein said reference electrode has dimensions larger than those of the active electrode.

9. (Currently Amended) An apparatus Apparatus according to claim [[2]] 1, characterized in that it comprises more further comprising additional active electrodes connected to a switch device able to connect in sequence said active electrodes to said generating means for generating radio-frequency radiation[[s]].

10. (Currently Amended) An apparatus Apparatus according to claim 1, characterized in that it comprises further comprising means for adjusting the temperature reached on the skin and able to vary the and the output power in order to keep the skin's skin temperature at a preset value.

11. (Currently Amended) An apparatus Apparatus according to claim 1, characterized in that wherein it comprises further comprising measuring means for measuring the output power and the impedance in correspondence of the application means.

12. (Currently Amended) An apparatus Apparatus according to claim 1, characterized in that wherein it comprises further comprising means to preset the duration of the treatment.

13. (Currently Amended) An apparatus Apparatus according to claim 1, characterized in that further comprising means for connection with an electronic processor.

14. (New) An apparatus for non-destructive hyperthermia therapies, the apparatus comprising:

generating means for generating radio-frequency electromagnetic radiation; and application means connected to said generating means for the application of said radiation to a skin portion of a human body, said application means comprising an active electrode and a reference electrode, said active electrode being provided with a skin temperature sensor means for the detection of skin temperature of the skin portion, said sensor means including at least a sensor part directly incorporated in or directly connected to said active electrode.